Environmental Assessment
Rehabilitate Cafeteria Building and Relocate Rim Parking

CRATER LAKE
National Park • Oregon

Environmental Assessment

Rehabilitate Cafeteria Building and Relocate Rim Parking

May 2003

CRATER LAKE NATIONAL PARK

Klamath County • Oregon

United States Department of the Interior • National Park Service

SUMMARY

The National Park Service (NPS) proposes to rehabilitate the cafeteria building and relocate parking at Rim Village in Crater Lake National Park. This action is part of the overall guidance for Rim Village identified in the 1999 *Crater Lake National Park Visitor Services Plan*.

This environmental assessment analyzes the impacts of three alternatives. Alternative 1 (no-action) would maintain the existing cafeteria building and parking area. Alternative 2 (preferred alternative) would adaptively reuse the 1928 cafeteria building and 1972 addition and relocate parking. Alternative 3 would rehabilitate the 1928 cafeteria building, remove all additions, construct a new visitor contact building, and relocate parking. The preferred alternative would result in minor to moderate long- term beneficial effects to vegetation and soils, cultural resources that contribute to the significance of the Rim Village Historic District's cultural landscape, the cultural landscape, visitor experience, and park operations. The preferred alternative would also result in minor long- term adverse impacts on soils and vegetation and the cultural landscape and short- term adverse impacts the visitor experience during construction.

Notes to Reviewers and Respondents

This environmental assessment is available on the Crater Lake National Park Internet Web site at http://www.nps.gov/crla and is being made available for public and agency review and comment for a period of 30 days. Comments, in the form of e- mails and letters, must be post marked by the due date.

If you wish to comment on the environmental assessment, you may mail comments to the name and address below. Our practice is to make comments, including names and home addresses of respondents, available for public review during regular business hours. Individual respondents may request that we withhold their home address from the record, which we will honor to the extent allowable by law. *If you want us to withhold your name and address, you must state this prominently at the beginning of your comment.* We will make all submissions from organizations and businesses, and from individuals identifying themselves as representatives or officials of organizations or businesses, available for public inspection in their entirety.

Please address written comments to: Chuck Lundy, Superintendent; Crater Lake National Park; Attn: Rehabilitate Cafeteria Building and Relocate Rim Parking; Post Office Box 7; Crater Lake, OR 97604.

Please address e- mail comments to: CRLA_Superintendent@nps.gov

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PURPOSE OF AND NEED FOR THE ACTION

PURPOSE AND NEED

The National Park Service (NPS) proposes to rehabilitate the cafeteria building and relocate parking at Rim Village in Crater Lake National Park. This action is part of the overall guidance for Rim Village identified in the 1999 *Crater Lake National Park Visitor Services Plan*. The overarching intent of this project is to help fulfill the goals for Rim Village that are identified in that plan. These goals are to enhance educational and interpretive opportunities, provide information and orientation services and accessible viewing of the lake, modify commercial services to better serve visitors, protect the historic designed landscape of the Rim Village Historic District, and improve natural resource protection.

The 1999 plan called for conversion of the cafeteria building to its original 1928 configuration and appearance. Over the years this original building was modified with three building additions in 1958, 1969, and 1972. The 1999 plan proposed to remove all of these later additions. The plan also included the addition of a basement beneath the building, construction of a new visitor contact station near the cafeteria building, and relocation of the rim parking lot away from the rim of Crater Lake. Since the approval of the 1999 plan, the National Park Service conducted a more detailed design analysis and identified a more sustainable design alternative. This design would involve the adaptive reuse of both the 1928 building and 1972 addition (including the basement) to achieve the desired visitor services and resource protection goals.

This environmental assessment (EA) analyzes the impacts of three alternatives on the environment in accordance with the National Environmental Policy Act of 1969, Council on Environmental Quality regulations (title 40 Code of Federal Regulation Part 1500 *et sequentia*), NPS policies, and other relevant laws and regulations. The three alternatives include the no-action alternative, alternative 2 (the preferred alternative) to adaptively reuse the 1928 building and 1972 addition, and alternative 3, the proposal from the 1999 *Crater Lake National Park Visitor Services Plan*.

PROJECT SETTING

Crater Lake National Park is in southwest Oregon in the south- central portion of the Cascade Range (see vicinity map). Crater Lake is the deepest lake in the United States and is renowned for its clarity and the intense blue color of its water. The waters are surrounded by the jagged, steep- walled cliffs of the caldera left by the climactic eruption and collapse of Mt. Mazama about 7,700 years ago. These cliffs rise from 500 to 2,000 feet above the lake's surface. The intensity of the water's color combined with the physical relief and coloration of the caldera's rim creates spectacular scenery.

The park's southern entrance station at Mazama Village is 76 miles from Medford and 56 miles from Klamath Falls and can be reached by Oregon State Route (OR) 62. The park can also be reached from the north by OR 138. Both south and north access roads lead to Rim Drive, a 33- mile roadway that circles the caldera rim. Pullouts along Rim Drive provide scenic lake views. Winter access is maintained only from the south and west on OR 62 through the Munson Valley headquarters area and up to Rim Village. Road closures, particularly between headquarters and the rim, are common during the winter because of frequent snowstorms.

Approximately 86% of visitation to the park is day use. Annual visitation is on the order of 500,000 visitors per year, the majority (75%) of which occurs between June and September. Most visitation is concentrated at Rim Village. Rim Village, at an elevation of 7,100 feet on the south edge of Crater Lake, has functioned as a year- round operation since 1948, although services are limited in the winter. Seasonal interpretive activities are provided from a small visitor contact facility near the rim and at the Sinnott Memorial overlook. Seasonal hotel accommodations are available at Crater Lake Lodge. Food services, gift sales, a picnic area, geology talks (summer only), and interpretive exhibits are also available at Rim Village. Related support facilities include parking for approximately 450 cars and concession employee housing.

PARK PURPOSE, SIGNIFICANCE, AND MISSION

Purpose, significance, and mission goals help frame decisions about managing park resources and providing for visitor use.

Park Purpose

Crater Lake National Park was established in 1902, "…dedicated and set apart forever as a public park or pleasure ground for the benefit and enjoyment of the people of the United States." In managing this park, the National Park Service is charged with "…preservation of the natural objects…the protection of the timber, and …the preservation of all kinds of game and fish." The National Park Service is committed to "…forever preserve the beauty of Crater Lake National Park, its unique ecological and cultural heritage; and to foster understanding and appreciation through enjoyment, education and inspiration." The NPS Organic Act of 1916 directs that the fundamental purpose of all parks is "to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations."

Significance Statements

- Crater Lake is one of the most famous lakes on earth, principally because of the beauty imparted by its large size, blue color, mountain setting, and ever- changing character.

- Crater Lake lies in a caldera that was left by the climatic eruption of Mount Mazama more than 7,700 years ago. The circular lake, which formed in the caldera, is considered by scientists to be a unique model for how small calderas evolve in geologic times. At a depth

of 1,943 feet, Crater Lake is the 7th deepest lake in the world and holds the world record for clarity among lakes.

- In addition to the lake, the forests that surround Crater Lake have never been logged and are largely preserved in their pristine condition. These mature forests harbor a variety of plant and animal life that are characteristic of higher elevations in the Cascade Range. Because extensive alteration of forestland has taken place elsewhere in the Cascade Range, some of these plants and animals are rare. The park forests, combined with the surrounding forest landscape, provide a contiguous experience. Those forests within the park boundary add unique opportunities for solitary and wilderness experiences.

- Some of the nation's best examples of blending rustic architecture and other built features with a national park setting can be seen at Rim Village, Park Headquarters in Munson Valley, and along Rim Drive. Much of Rim Village and Park Headquarters are within districts listed on the National Register of Historic Places. Rim Drive is in the process of being nominated to the national register. Crater Lake is of enduring importance to contemporary members of American Indian tribes because of its centrality to long- standing cultural traditions and resource harvesting activities, as well as its symbolic significance as a sacred site. The park is part of a larger cultural landscape that extends well beyond park boundaries

- Crater Lake has been the object of scientific study for more than a century, and is unique for the scientific research related to its pristine waters, associated geothermal activities, and unusual aquatic organisms.

- The unique natural and cultural resources of Crater Lake National Park provide exemplary opportunities for students and educators.

Park Mission

To forever preserve the beauty of Crater Lake National Park, its unique ecological and cultural heritage, and to foster understanding and appreciation through enjoyment, education, and inspiration.

RELATIONSHIP WITH OTHER PLANS AND STUDIES

Overall guidance for actions at Rim Village is provided as part of the 1999 *Crater Lake National Park Visitor Services Plan*. The plan is a blend of actions intended to improve the protection of park resources while providing enjoyable visitor experiences. It states that NPS interpretive services will be emphasized, commercial services will be modified to better serve visitors, and some historic structures will be used more as they were initially intended. The plan identifies the levels and kinds of National Park Service and concession services desired at Rim Village as well as the other major developed areas within the park. At Rim Village, visitors will have access to essential interpretive and commercial services to meet immediate needs, with other services that would detain visitors in Rim Village provided elsewhere.

The park is currently updating its general management plan (GMP). The purpose of the plan is to provide long- term direction for resource management, visitor use and interpretation, and facility needs and uses for the park. The GMP will build upon the direction and guidance provided in the 1999 *Visitor Services Plan*.

A Value Analysis Study for the rehabilitation of the cafeteria building and relocation of parking was completed in 2002. The study evaluated the provision of necessary functions in the most cost effective and efficient manner. The study identified a design alternative for these facilities that was consistent with the management goals of the 1999 *Visitor Services Plan* and adpatively reused both the 1928 and 1972 buildings. The design also offered a significant cost savings over the proposal from the 1999 visitor services plan. This alternative is presented in the "Alternatives, Including the Preferred Alternative" section as alternative 2 (the preferred alternative).

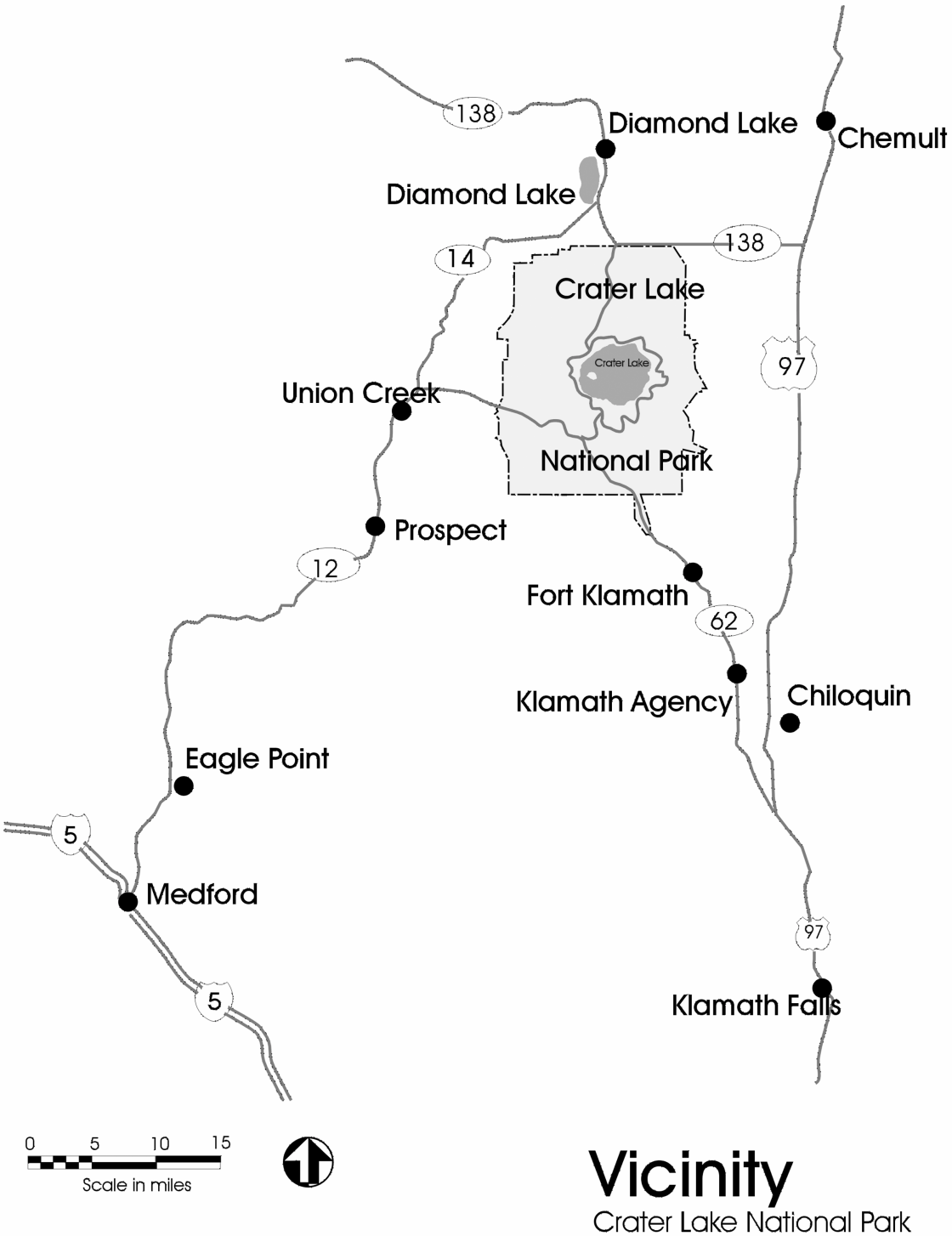
ISSUES AND IMPACT TOPICS

Issues and concerns affecting this project were identified based on past planning efforts as well as internal and external input provided during project scoping. Scoping is the effort to involve agencies and the general public in determining the nature and extent of issues to be addressed in this environmental assessment. A press release initiating public scoping and describing the project was issued in November 2002 to inform the public about the project and request their comments and concerns. Letters were also sent out to tribes and the state historic preservation office (see "Consultation and Coordination" section). The primary issues identified included preservation of Rim Village Historic District including the cultural landscape; limited educational and interpretive opportunities in the project area; congestion and traffic and pedestrian conflicts that effect visitor enjoyment and lake viewing at the rim; and the provision of commercial services to better serve visitors at the rim.

Impact Topics Analyzed in this Document

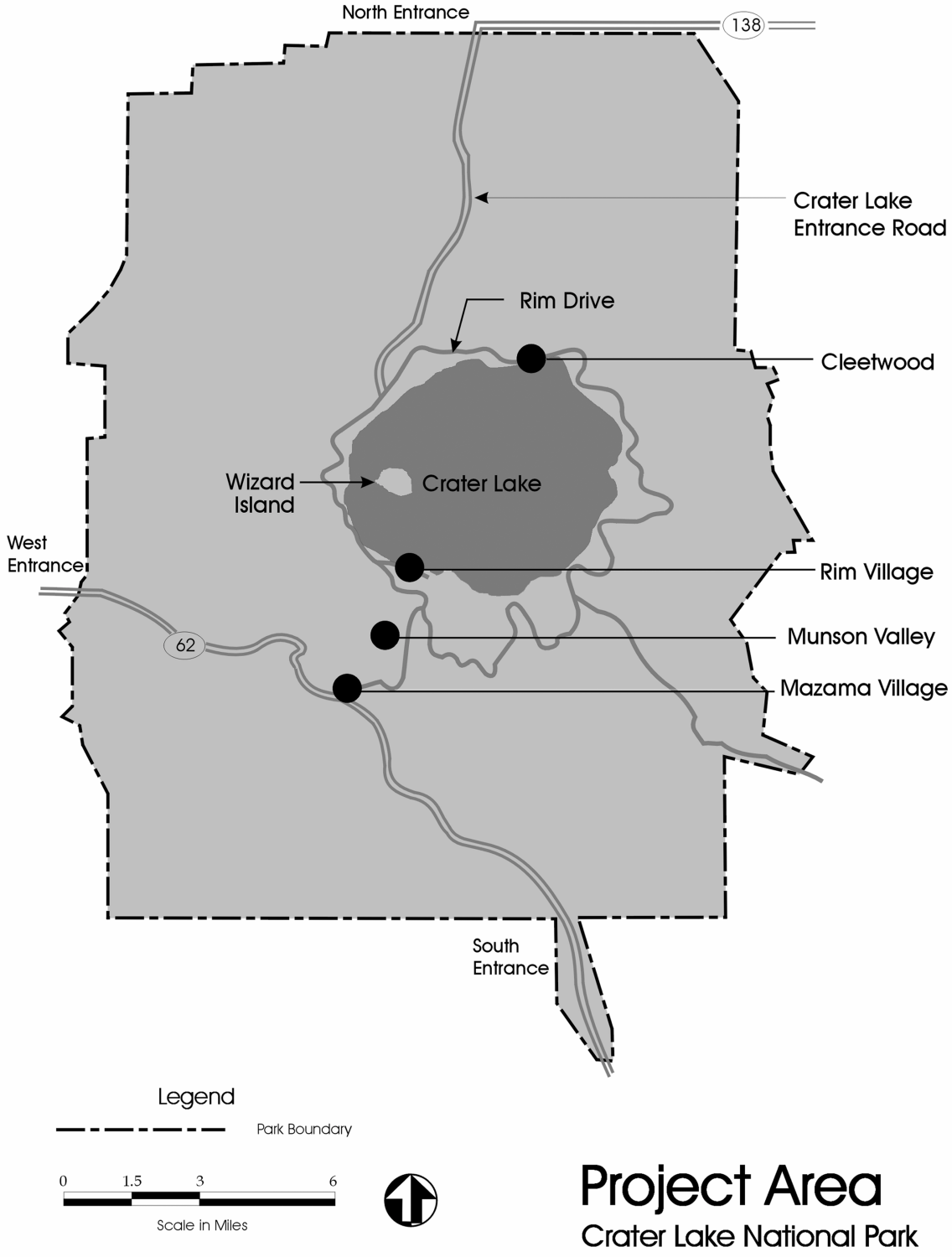
Specific impact topics were selected to focus the discussion and to allow comparison of the environmental consequences of each alternative. These impact topics were identified based on applicable federal laws, regulations, and orders; NPS *Management Policies, 2001*; NPS knowledge of special or easily impacted resources; and the major values or issues identified during scoping that may be affected by the alternatives. The following impact topics are analyzed in this environmental assessment.

Vegetation and Soils. The 1916 Organic Act mandates that the Park Service conserve resources such as vegetation and soil. NPS policy (*National Park Service Management Policies* 2001), is to maintain all the components and processes of naturally evolving park ecosystems. Soil properties are integral components of determining the species diversity, productivity, and regenerative capacity of vegetation communities. Therefore vegetation and soils are evaluated under one impact topic. Soils and vegetation in the project area would be removed or disturbed as the result of construction activities. Removal and redesign of some facilities would also facilitate restoration and revegetation of currently disturbed or developed areas.



Vicinity

Crater Lake National Park



Project Area

Crater Lake National Park

Cultural Landscapes. The National Historic Preservation Act of 1966 (NHPA), as amended; the National Environmental Policy Act (NEPA); *National Park Service Management Policies 2001*; DO-28, NPS *Cultural Resource Management Guideline*; and DO-12, NPS *Conservation Planning, Environmental Impact Analysis, and Decision Making* require assessment of the impacts of federal projects on historic structures and buildings and cultural landscapes listed in, or determined eligible for listing in, the National Register of Historic Places.

The project area is located in Rim Village Historic District. The district was listed in the National Register of Historic Places in 1997. The historic district, which includes seven contributing structures and other individual features that comprise a designed historic landscape in terms of form and function, is listed under criterion A for its association with the historical development of Crater Lake National Park and criterion C for its association with site planning and design by NPS landscape architects and as outstanding examples of rustic naturalistic design in the areas of architecture and landscape architecture. The structures and features were constructed over a 15-year period beginning in 1926.

Visitor Experience. Providing for visitor enjoyment is one of the primary purposes of the National Park Service, according to the 1916 Organic Act. The alternatives would affect the visitor experience, including the availability of orientation, interpretation, information, food, and retail services, lake viewing opportunities, visitor circulation and site aesthetics, and visitor safety.

Park Operations. *National Park Service Management Policies*, 2001; Executive Order 13123 (Greening the Government Through Efficient Energy Management); Executive Order 13101 (Greening the Government Through Waste Prevention, Recycling and Federal Acquisition); NPS *Guiding Principles of Sustainable Design*; and DO-90 (Value Analysis) direct that the National Park Service and concessioner visitor management facilities be harmonious with park resources, compatible with natural processes, aesthetically pleasing, functional, as accessible as possible to all segments of the population, energy-efficient, and cost-effective. The alternatives would affect both park and concession operations at Rim Village. Facilities and site design proposals under the alternatives would affect safety standards, effectiveness and efficiency of operations such as year-round operation capabilities, access, and snow management, the opportunity for adaptive reuse of existing facilities, and costs.

Impact Topics Dismissed from Further Analysis

The topics listed below either would not be affected or would be affected negligibly by the alternatives evaluated in this environmental assessment. Therefore, these topics have been dismissed from further consideration or analysis. Negligible effects are effects that are localized and immeasurable or at the lowest levels of detection.

Air Quality. The Clean Air Act requires federal land managers to protect park air quality. The 2001 *National Park Service Management Policies* call for air resource management to be integrated into NPS operations and planning and for all air pollution sources within parks to comply with all federal, state, and local air quality regulations. Crater Lake National Park was designated a class I area under the Clean Air Act, as amended. A class I area is subject to the

most stringent regulations of any designation. Dust and equipment emissions would occur during construction and would only affect areas very near the construction site. Emissions and particulates would be rapidly dissipated since air stagnation is rare at the project area. Mitigation measures such as watering the construction site to minimize dust would be employed. Effects would be short term and negligible, lasting only during the construction period, and would not degrade the park's class I air quality.

Floodplains/Wetlands. Executive Orders 11988 (Floodplain Management) and 11990 (Protection of Wetlands) require an examination of impacts to floodplains and wetlands, of potential risk involved in placing facilities within floodplains, and protecting wetlands. The 2001 *National Park Service Management Policies* and DO-12 (*Conservation Planning, Environmental Impact Analysis, and Decision Making*) provide direction for development proposed in floodplains and wetlands. Two intermittent streams originate in the general area of Rim Village. A palustrine emergent wetland is associated with one of the streams and is west of Rim Drive at the entrance to Rim Village. Floodplains associated with these streams are narrow, extending no more than a few feet beyond the mean high-water line. No facilities are proposed for development within or adjacent to the wetland or floodplains. Mitigation measures such as silt fencing to prevent sedimentation from construction site runoff would be employed to avoid potential indirect adverse effects.

Water Quality/Annie Creek Flows. The 1972 Federal Water Pollution Control Act, as amended by the Clean Water Act of 1977, is a national policy to restore and maintain the nation's waters, to enhance the quality of water resources, and to prevent, control, and abate water pollution. The 2001 NPS *Management Policies* direct that surface and ground waters are restored or enhanced and that NPS permitted programs and facilities are maintained and operated to avoid pollution of surface and ground waters. There are no lakes, rivers, or springs within the project area that would be affected by the alternatives. Annie Spring supplies water to storage facilities at Rim Village as well as Mazama Village and Munson Valley. Reduction in concession services at the Rim would slightly reduce water demand, resulting in a slight increase in creek flows.

Wildlife. The park provides a large block of relatively undisturbed habitat that supports healthy populations of native wildlife species. Although several species of wildlife, particularly those associated with mountain hemlock forest or open grassland, may reside in or near the project area, the actions evaluated in this environmental assessment would be undertaken in a developed area that supports high visitation and vehicular traffic. Wildlife in the project area would be habituated to high levels of disturbance and human activity and would be affected negligibly, if at all, by the actions evaluated in this environmental assessment. Most of the area that would be impacted by project construction activities has been previously disturbed and developed, and loss of habitat would be negligible.

Special Status Species. According to the U.S. Fish and Wildlife Service, eight species listed as federal threatened, endangered, or candidate species may occur in the park. There would be no effect on the shortnose sucker, Lost River sucker, bull trout, or Oregon spotted frog. They have not been documented in the project area nor is there suitable habitat available within the project area. The project would have no effect on the bald eagle, northern spotted owl, or Canada lynx. The project would be confined to the existing rim developed area, and no

potential habitat for these three species exists in the project area. In addition, no nesting habitat for the bald eagle and spotted owl occurs in the vicinity of the rim developed area.

In addition, several state- listed sensitive species are in the park. In general, most of these species have specific habitat requirements. Many of the species in the park require wetlands, streams, late- successional forest, or ponderosa or lodgepole forests. Consequently, suitable habitat does not exist in the project area for most of them. Swainson's hawk and northern goshawk may forage near the project area. California wolverine and Pacific fisher travel regularly over large distances and could potentially use the developed area as part of a much larger home range. However these species tend to avoid areas with human activity or development. No effect on these species is expected. This is based on: their low probability of inhabiting the proposed construction area given their habitat requirements; no documented occurrences in the project area; the limited extent and short- term duration of impacts in relation to the amount of habitat elsewhere; and impacts would all occur within an existing, heavily used, developed area. American martin are present at the rim developed area, but have habituated to human disturbance.

Wilderness. The Wilderness Act of 1964 directs that wilderness be protected and managed so that it "generally appears to have been affected primarily by the forces of nature, with the imprint of man's work substantially unnoticeable," and so that it "has outstanding opportunities for solitude, or a primitive and unconfined type of recreation." A 1994 wilderness proposal for Crater Lake National Park included all the acreage within the park with exclusions for road corridors, utility lines, and administrative sites. The Rim Village developed area is excluded from that wilderness proposal, and the actions evaluated in this environmental assessment would not intrude on wilderness lands.

Natural Soundscapes and Lightscapes. The 2001 *National Park Service Management Policies* state that the National Park Service will strive to preserve the natural quiet and natural sounds associated with the physical and biological resources of parks. In accordance with *National Park Service Management Policies* 2001, the National Park Service will strive to preserve natural ambient landscapes and values that exist in the absence of human- caused light. The project area is located in Rim Village, a developed area where noise and lights associated with people, traffic, and structures already occurs and which would not change under any of the alternatives. Noise and lighting from construction would be temporary and would not cause long- term noise or light pollution.

Land Use. Land uses within the project area would remain the same under all of the alternatives. There would not be any change to land uses surrounding the parks as the result of any of the alternatives.

Prime and Unique Farmlands. In 1980 the Council on Environmental Quality (CEQ) directed that federal agencies assess the effects of their actions on farmland soils classified as prime or unique by the Natural Resources Conservation Service, U.s. Department of Agriculture. Prime or unique farmland is defined as soil that particularly produces general crops such as common foods, forage, fiber, and oil seed; unique farmland produces specialty crops such as fruits, vegetables, and nuts. There are no prime or unique farmlands associated with the project area and this impact topic was dismissed from further analysis.

Archeological Resources. A cultural resource survey of the Rim Village area was completed by Rick Minor and Robert R. Musil of Heritage Research Associates in 1989. No archeological resource sites were recorded in the project area, and no archeological resources either listed in, or determined eligible for listing in, the National Register of Historic Places are known to exist in the project area. Thus, archeological resources were dismissed as an impact topic.

If previously unknown archeological resources were discovered during construction, all work in the immediate vicinity of the discovery would be halted until the resources could be identified, evaluated, and documented and an appropriate mitigation strategy developed, if necessary, in consultation with the Oregon State Historic Preservation Office pursuant to the provisions of the "Programmatic Agreement Among National Park Service, Crater Lake National Park, State Historic Preservation Officer, Advisory Council on Historic Preservation regarding Draft Visitor Services Plan/Environmental Impact Statement, Crater Lake National Park, Oregon (1998). In the unlikely event that human remains, funerary objects, or objects of cultural patrimony were discovered during construction, applicable provisions of the Native American Graves Protection and Repatriation Act (NAGPRA) of 1990 (25 USC 3001) would be implemented.

Ethnographic Resources. According to DO-28, NPS *Cultural Resource Management Guideline*, an ethnographic resource is defined as any "site, structure, object, landscape, or natural resource feature assigned traditional legendary, religious, subsistence, or other significance in the cultural system of a group traditionally associated with it." The National Park Service has consulted with affiliated tribes as part of scoping for this project. No ethnographic resources have been identified in or in proximity to the project area. Copies of this document will be transmitted to each affiliated tribe for review and comment. If the tribes subsequently identify the presence of ethnographic resources in or in proximity to the project area, appropriate mitigation measures would be undertaken in consultation with the tribes.

Because it is unlikely that ethnographic resources would be affected and because appropriate steps would be taken to protect any human remains, funerary objects, or objects of cultural patrimony that might be discovered during construction in compliance with the aforementioned "Programmatic Agreement" and the provisions of NAGPRA, ethnographic resources were dismissed as an impact topic.

Historic Structures/Buildings. The cafeteria building was constructed at Rim Village in 1928. However, the structure has lost its historic integrity as a result of additions in 1958, 1969, and 1972, and it is not listed as a contributing resource to the significance of Rim Village Historic District. Under alternative 2 (preferred alternative) the building would be returned to its approximate 1928 configuration and external appearance by removal of the 1958 and 1969 additions. The 1972 addition, however, would be retained as a separate, free-standing structure to the east of the cafeteria building. Under alternative 3, the cafeteria building would be returned to its approximate 1928 configuration and external appearance by the removal of the 1958, 1969, and 1972 additions. Thus, the national register eligibility of this building should be reevaluated in consultation with the Oregon State Historic Preservation Office if either alternative 2 or alternative 3 is selected and implemented.

Comfort station No. 4, located directly behind the cafeteria, was constructed at Rim Village in 1931. The building is currently listed as a contributing resource of Rim Village Historic District, although its integrity has been compromised by alterations undertaken ca. 1971 when the function of the building changed from a comfort station to an electrical transformer vault. Changes included removing most windows and filling the openings with concrete blocks finished with plywood. One of the two original entry doors remains intact. Under alternatives 2 and 3 the interior of the comfort station would be adaptively reused for NPS operations or visitor use (the exact nature of which has not been determined) and the exterior restored to its historic appearance. Thus, any work affecting this building would be conducted in consultation with the Oregon State Historic Preservation Office if either alternative 2 or 3 is selected and implemented.

Museum Collections. The DO-28, NPS *Cultural Resource Management Guideline* and *National Park Service Management Policies 2001* require consideration of the impacts of federal projects on museum collections (historic artifacts, natural specimens, and archival and manuscript materials). There are no museum collections in the project area, and none of the alternatives would have any effect on the park's museum collections. Thus, museum collections were dismissed as an impact topic.

Indian Trust Resources. Secretarial Order 3175 requires that any anticipated impacts to Indian trust resources from a proposed project or action by Department of Interior agencies be explicitly addressed in environmental documents. The federal Indian trust responsibility is a legally enforceable fiduciary obligation on the part of the United States to protect tribal lands, assets, resources, and treaty rights, and it represents a duty to carry out the mandates of federal law with respect to American Indian and Alaska Native tribes.

There are no Indian trust resources in Crater Lake National Park. The lands compromising the park are not held in trust by the Secretary of the Interior for the benefit of Indians due to their status as Indians. Therefore, Indian trust resources were dismissed as an impact topic.

Socioeconomics and Environmental Justice. Actions evaluated in this environmental assessment would have short-term economic benefits from construction-related expenditures and employment and could include economic gains for some local and regional businesses and individuals. These effects would be negligible in context of the overall local and regional economy.

Executive Order 1298, *General Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, requires all federal agencies to incorporate environmental justice into their missions by identifying and addressing disproportionately high and adverse human health environmental effects of their programs and policies on minority and low-income populations and communities. The actions evaluated in this environmental assessment would not result in adverse health or environmental affects on socially or economically disadvantaged populations or communities as defined in the Environmental Protection Agency's *Environmental Justice Guidance* (1998).

ALTERNATIVES, INCLUDING THE PREFERRED ALTERNATIVE

ALTERNATIVE 1: NO ACTION

Under the no- action alternative, the Rim Village cafeteria building would continue to provide seasonal cafeteria and restaurant service, as well as gift and sundry sales. The cafeteria building would also continue to provide limited visitor information, orientation, and food service in the winter. The parking lot in front of the cafeteria, next to the caldera rim, would remain.

ALTERNATIVE 2: PREFERRED ALTERNATIVE

This alternative proposes adaptive reuse of the Rim Village cafeteria building for both NPS and concession services. The cafeteria building is in reality, a connected 'building complex'. It is composed of the original 1928 building and several additions completed in 1958, 1969 and and 1972. The building would be returned to its near- original 1928 configuration. The 1957 and 1969 additions would be removed, leaving the 1928 building for use by the National Park Service as a visitor contact station that would provide information, orientation, interpretation, Natural History Association (NHA) sales, a full- service post office for the summer, and year- round views of the lake. The 1972 portion of the building would be rehabilitated to accommodate a deli/fast food service, limited sundry and gift sales related to Crater Lake, and a multipurpose area. In the winter a minimal amount of prepackaged food and beverages would continue to be available for visitors. The existing basement beneath the 1972 addition would be retained to provide NPS and concession storage. A tunnel would be constructed to connect the 1972 basement and the 1928 building. The interior of comfort station No.4 would be adaptively reused for NPS operations or visitor use and the exterior restored to its historic appearance. A connection would be maintained with the 1928 building.

The parking lot in front of the cafeteria, next to the caldera rim, would be removed, and two new smaller parking lots would be built south and east of the cafeteria. The new parking would be sited and designed in a linear fashion in keeping with the historic cultural landscape. Retaining walls would be constructed along sections of the new parking area to minimize the extent of site grading to the south. The new lots would be connected to Rim Village Drive just east of the visitor contact station, thereby eliminating traffic in front of the cafeteria building and visitor contact facility. The area in front of the cafeteria building would be converted to pedestrian space. Visitors could use this space to walk from the visitor contact station and cafeteria building to the rim edge to view the lake and to walk along the promenade.

Restoration and revegetation in the project area would conform with the planting concepts of the designed historic landscape as documented in "The Rustic Landscape of Rim Village, 1927- 41, Crater Lake National Park" (NPS 1990). Tree and shrub species would be those used historically. In some cases groundcover vegetation would incorporate hardier native species in order to establish a sustainable landscape that would not require regular irrigation. Native genotypes collected from similar habitats in the park would be used in restoration and revegetation.

Construction is expected to begin in the spring of 2004 and be completed by winter 2005. However, construction could be delayed by weather conditions, funding constraints, or other unexpected events.

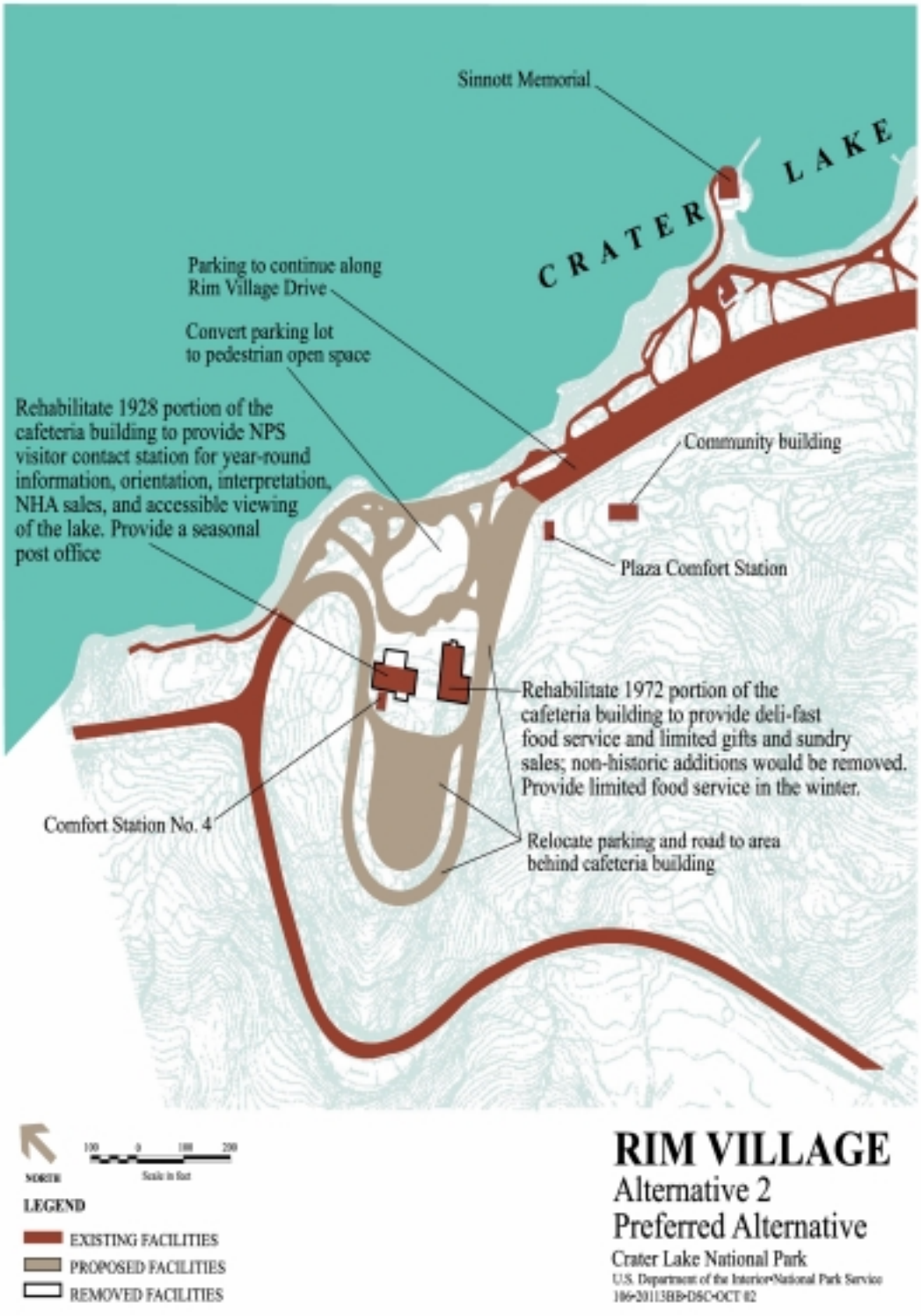
ALTERNATIVE 3

Alternative 3 is based on the planning direction presented in the *Record of Decision* for the 1999 *Visitor Services Plan / Environmental Impact Statement*. A new visitor contact station would be built at Rim Village near the cafeteria building to provide the same type services as proposed under alternative 2 — information, orientation, interpretation, Natural History Association (NHA) sales, a full- service post office for the summer, and year- round views of the lake. The cafeteria building would be converted to its original 1928 configuration and external appearance, and all of the additions to the building would be removed. The rehabilitated cafeteria would also provide the same services as proposed for alternative 2 — a deli/fast food service, limited sundry and gift sales related to Crater Lake, and a multipurpose area. In the winter a minimal amount of prepackaged food and beverages would continue to be available for visitors. A complete basement for food service and merchandise storage would be constructed beneath the rehabilitated 1928 cafeteria building. The interior of comfort station No.4 would be adaptively reused for NPS operations or visitor use and the exterior restored to its historic appearance. A connection would be maintained with the 1928 building.

The parking lot in front of the cafeteria, next to the caldera rim, would be removed, and a new smaller parking lot would be built south of the cafeteria. Retaining walls would be constructed along sections of the new parking area to minimize the extent of site grading to the south. The new lot would be connected to Rim Village Drive just east of the visitor contact station, thereby eliminating traffic in front of the cafeteria building and visitor contact facility. The area in front of the cafeteria building would be converted to pedestrian space. Visitors could use this space to walk from the visitor contact station and cafeteria building to the rim edge to view the lake and to walk along the promenade.

Restoration and revegetation in the project area would conform with the planting concepts of the designed historic landscape as documented in "The Rustic Landscape of Rim Village, 1927- 41, Crater Lake National Park" (NPS 1990). Tree and shrub species would be those used historically. In some cases groundcover vegetation would incorporate hardier native species in order to establish a sustainable landscape that would not require regular irrigation. Native genotypes collected from similar habitats in the park would be used in restoration and revegetation.

Construction is expected to begin in the spring of 2004 and be completed by winter 2005. However, construction could be delayed by weather conditions, funding constraints, or other unexpected events.


Sinnott Memorial
CRATER LAKE
Parking to continue along Rim Village Drive
Convert parking lot to pedestrian open space
Rehabilitate 1928 portion of the cafeteria building to provide NPS visitor contact station for year-round information, orientation, interpretation, NHA sales, and accessible viewing of the lake. Provide a seasonal post office
Community building
Plaza Comfort Station
Rehabilitate 1972 portion of the cafeteria building to provide deli-fast food service and limited gifts and sundry sales; non-historic additions would be removed. Provide limited food service in the winter.
Comfort Station No. 4
Relocate parking and road to area behind cafeteria building
NORTH
100 0 100 200
Scale in feet
LEGEND
EXISTING FACILITIES
PROPOSED FACILITIES
REMOVED FACILITIES
RIM VILLAGE
Alternative 2
Preferred Alternative
Crater Lake National Park
U.S. Department of the Interior•National Park Service
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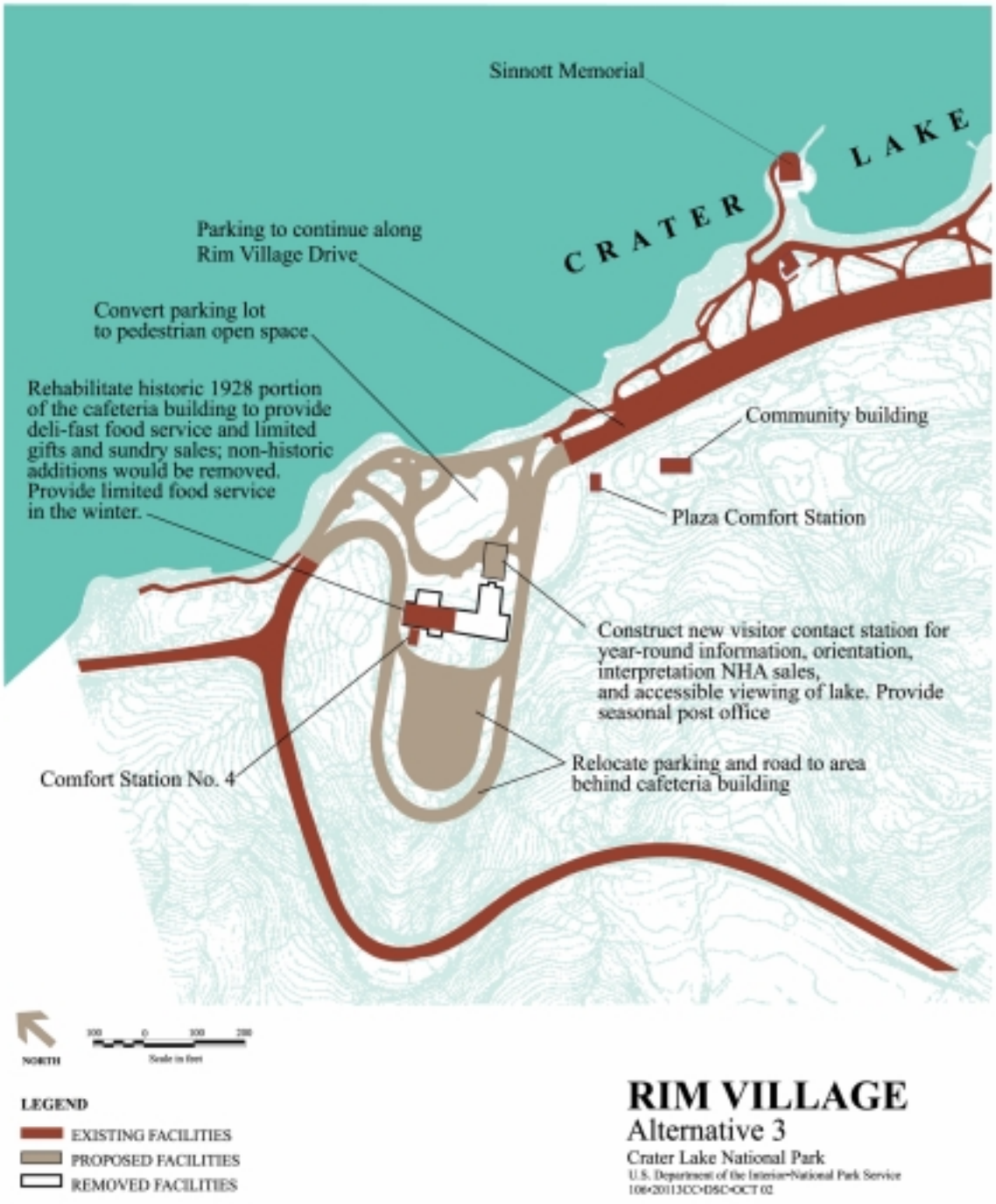
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Provide limited food service
in the winter.
Community building
Plaza Comfort Station
Construct new visitor contact station for
year-round information, orientation,
interpretation NHA sales,
and accessible viewing of lake. Provide
seasonal post office
Relocate parking and road to area
behind cafeteria building
Comfort Station No. 4
NORTH
100 0 100 200
Scale in feet
LEGEND
EXISTING FACILITIES
PROPOSED FACILITIES
REMOVED FACILITIES
RIM VILLAGE
Alternative 3
Crater Lake National Park
U.S. Department of the Interior•National Park Service
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MITIGATION MEASURES

The following measures have been incorporated into the project to avoid or reduce impacts to park resources and visitors.

Construction zones would be identified and where necessary protective fencing and barricades around the construction site would be provided for safety and to define the construction limits and confine activity to the minimum area required for construction. All protection measures would be clearly stated in the construction specifications and workers would be instructed to avoid conducting activities beyond the construction zone.

Dust emissions during construction would be minimized by application of water to the construction area.

Construction would occur within primarily previously disturbed areas. Erosion and sediment control measures such as silt fences would be used to minimize any potential soil erosion during construction activities. A revegetation plan would be developed in accordance with the recommendations of *The Rustic Landscape of Rim Village, 1927-1941, Crater Lake National Park, Oregon* (1990). The overall goal of revegetation is to recreate the planting concepts of designed historic landscape. Tree and shrub species would conform with the historical species list, with trees in the project area salvaged and replaced to the extent feasible. In some cases groundcover vegetation would incorporate hardier native species in order to establish a sustainable landscape that would not require regular irrigation. Native genotypes collected from similar habitats in the park would be used in restoration and revegetation. Topsoil would be conserved. Replacement of soil would include spreading, scarification, mulching, and seeding and/or planting.

All project work, including the rehabilitation of historic structures/buildings and cultural landscapes, would be conducted in accordance with the guidelines and recommendations of the following documents: Secretary *of the Interior's Standards for the Treatment of Historic Properties With Guidelines for the Treatment of Cultural Landscapes*; *Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings*; *The Rustic Landscape of Rim Village, 1927-1941*; National Register of Historic Places Inventory Nomination Form, "Historic Resources of Crater Lake National Park," 1996 Amendment; and "Programmatic Agreement Among National Park Service, Crater Lake National Park, State Historic Preservation Officer, Advisory Council on Historic Preservation regarding *Draft Visitor Services Plan/Environmental Impact Statement, Crater Lake National Park, Oregon* (1998).

If previously unknown archeological resources were discovered during construction, work in the immediate vicinity of the discovery would be halted until the resources could be identified, evaluated, and documented and an appropriate mitigation strategy was developed, if necessary, in consultation with the Oregon State Historic Preservation Office pursuant to the provisions of the aforementioned "Programmatic Agreement" (1998). In the unlikely event that human remains, funerary objects, or objects of cultural patrimony were discovered during construction, applicable provisions of NAGPRA and the aforementioned "Programmatic Agreement" (1998) would be implemented.

Information would be distributed to visitors via signs and/or written material to safely direct traffic and pedestrians use within or around the project area during construction. Commercial food and retail services would continue to be available during the construction period, although at reduced levels.

ALTERNATIVES CONSIDERED BUT DISMISSED FROM FURTHER ANALYSIS

The 2002 Value Analysis identified and evaluated a number of alternatives for rehabilitating the existing cafeteria building and relocating parking. The design alternative that best met the purpose and need for this project is presented in this document as alternative 2 (preferred alternative). All of the other alternatives included retaining the 1928 building, with various combinations of either rehabilitating or removing the additions and providing for a basement or remote storage. These alternatives were considered and dismissed from further consideration based on deficiencies associated with a number of factors including: protection of public health, safety, and welfare; protection of cultural and natural resources; efficiency, reliability, and sustainability of park operations; provision of visitor services, education, and recreational opportunities; and costs.

ENVIRONMENTALLY PREFERABLE ALTERNATIVE

In accordance with Director's Order-12, *Conservation Planning, Environmental Impact Analysis, and Decision-making*, the National Park Service is required to identify the "environmentally preferred alternative" in all environmental documents, including environmental assessments. The environmentally preferred alternative is determined by applying the criteria suggested in the National Environmental Policy Act (NEPA) of 1969, which is guided by the Council on Environmental Quality (CEQ). The CEQ provides direction that "[t]he environmentally preferable alternative is the alternative that will promote the national environmental policy as expressed in NEPA's section 101", which considers the following:

1. Fulfilling the responsibilities of each generation as trustee of the environment for succeeding generations
2. Assuring for all generations safe, healthful, productive, and esthetically and culturally pleasing surroundings
3. Attaining the widest range of beneficial uses of the environment without degradation, risk of health or safety, or other undesirable and unintended consequences
4. Preserving important historic, cultural, and natural aspects of our national heritage and maintaining, wherever possible, an environment that supports diversity and variety of individual choice
5. Achieving a balance between population and resource use that will permit high standards of living and a wide sharing of life's amenities
6. Enhancing the quality of renewable resources and approaching the maximum attainable recycling of depletable resources (NEPA section 101(b)

Alternative 1, the no-action alternative, would continue to preserve important cultural and natural resources (criteria 4). However, educational and informational opportunities for visitors would remain limited by lack of adequate facilities; commercial services would not be modified to better serve visitors; conflicts between pedestrians and vehicle traffic would continue; and maintenance operations such as snow removal would not be improved (criteria 1-6).

Alternative 2, the NPS preferred alternative, is the environmentally preferred alternative because it more fully meets criteria 1-6 in comparison to the other alternatives. Rehabilitation and adaptive reuse of the 1928 and 1972 portions of the cafeteria building for educational, informational, and concession services would greatly enhance the visitor experience and provide the greatest opportunity for adaptive reuse of existing facilities and thus minimizing new structures within the Rim Village National Historic District. (criteria 1, 2, 4, 6). Relocation of parking and redesign of the current parking area as a pedestrian promenade would provide a more aesthetic and pleasant access for viewing of the lake and eliminate pedestrian and vehicle traffic conflicts (criteria 2). Operational efficiency and sustainability would be improved with fewer but still clustered buildings and improved winter access and snow removal (criteria 3-6).

Alternative 3 would provide many of the same benefits of alternative 2, including preservation of the integrity of the Rim Village National Historic District and protection of the natural environment (criteria 1 and 4), better education and information opportunities (criteria 1), improved visitor safety (criteria 2), and improved operational efficiency and sustainability (criteria 3-6). However, alternative 3 would not fully meet criteria 1, 2, 4 and 6 in comparison with alternative 2 because alternative 3 and would not adaptively reuse the 1972 addition and would add a new structure within the Historic District and to the view from on the rim.

Table 1. Comparison of Alternatives

Alternative 1 – No Action	Alternative 2 – Preferred Alternative	Alternative 3
The original 1928 cafeteria building would remian. The existing building complex would continue to provide food, sundries, gifts, and limited NPS information.	The original 1928 cafeteria building would be rehabilitated for use by the National Park Service as a visitor contact station.	The original 1928 cafeteria building would be rehabilitated to accommodate limited food, sundries, and gifts.
The 1958, 1969, and 1972 additions would remain.	The 1957 and 1969 additions would be removed. The 1972 portion of the building would be rehabilitated to accom-modate limited food, sundries, gifts, and a multipurpose area. A tunnel would be constructed to connect the 1972 basement and the 1928 building.	The 1957, 1969, and 1972 additions would be removed.
	The existing basement under the 1972 building would be retained for storage.	A new basement would be constructed beneath the 1928 building for storage.
	The interior of comfort station No. 4 would be adaptively reused and the exterior restored to its historic appearance.	The interior of comfort station No. 4 would be adaptively reused and the exterior restored to its historic appearance.
		A new visitor contact station would be built near the cafeteria building.
Parking in front of the cafeteria, next to the caldera rim, would remain.	Parking in front of the cafeteria would be relocated to a smaller area behind the 1928 cafeteria building and east of the 1972 building.	Parking in front of the cafeteria would be relocated to a smaller area behind the 1928 cafeteria building.

Table 2: Comparison of Environmental Impacts

Impact Topic	Alternative 1 – No Action	Alternative 2 – Preferred Alternative	Alternative 3
Vegetation and Soils	There would be no affect on vegetation and soils in the project area. The no- action alternative would not contribute to cumulative effects on vegetation or soils in the park.	About 1 to 2 acres of grassland meadow vegetation and soils would be disturbed by construction, a long-term, minor, adverse effect. About 2 acres would be restored following removal of the existing cafeteria parking lot, a long- term, minor, beneficial effect. Alternative 3 would contribute both a beneficial and adverse localized, minor increment to the total cumulative effects on vegetation and soils in the park.	Same as alternative 2.
Cultural Landscapes	There would be indirect, adverse, moderate, long- term impacts on cultural resources and historic visitor- use patterns in Rim Village Historic District.	Alternative 2 would generally have beneficial, moderate, long- term impacts on the cultural resources that contribute to the significance of Rim Village Historic District's cultural landscape. However, retention of the 1972 addition to the cafeteria building as a separate, free- standing structure to the east of the caféteria building would have a adverse, minor, long- term impact on the cultural landscape. Implementation of this alternative would also ensure that historic visitor use patterns associated with the development of Rim Village would be less dangerous.	Alternative 3 would have beneficial, moderate, long- term impacts on cultural resources that contribute to the significance of the Rim Village Historic District's cultural landscape. Implementation of this alternative would also have beneficial, moderate, long- term impacts on the cultural landscape because historic visitor use patterns on the rim would be restored and preserved. Construction of a new visitor contact facility near the cafeteria building would have a adverse, minor, long-

Impact Topic	Alternative 1 – No Action	Alternative 2 – Preferred Alternative	Alternative 3
			term impact on the cultural landscape of Rim Village Historic District. The impact of the new structure, however, would be reduced because it would be constructed in a style compatible with other buildings in the district. Section 106 Summary. Implementation of this alternative would have no adverse effect on cultural resources that contribute to the significance of Rim Village Historic District.
	Section 106 Summary. Implementation of this alternative would have no adverse effect on cultural resources that contribute to the significance of Rim Village Historic District.	Section 106 Summary. Implementation of this alternative would have no adverse effect on cultural resources that contribute to the significance of Rim Village Historic District.	
Visitor Experience	There would be no change to the visitor experience under the no-action alternative. The no-action alternative would not contribute to cumulative effects on visitors.	Alternative 2 would improve the visitor environment, lake-viewing opportunities, safety, and information, orientation, and interpretation services, resulting in a long-term, moderate benefit to visitor safety and experience at Rim Village. There would be short-term, adverse effects on the visitor experience at Rim Village during the construction period. Alternative 2 would contribute a moderate, short-term, adverse effect during construction but would contribute a long-term, moderate, beneficial effect on the cumulative effects on visitors.	Same as alternative 2. There would be a negligible effect on views from the rim due to the construction of the visitor contact building.

Impact Topic	Alternative 1 – No Action	Alternative 2 – Preferred Alternative	Alternative 3
Park Operations	The no- action alternative would not change park maintenance operations and would not contribute to cumulative effects on park operations in the park.	There would be a long-term minor beneficial effect on park operations. Alternative 2 would contribute a minor long-term beneficial increment to the cumulative effects on park operations.	Same as alternative 2.

AFFECTED ENVIRONMENT

VEGETATION AND SOILS

Rim Village is at an elevation of about 7,100 feet on the south rim. Within the Village area, slopes of approximately 5 to 30% extend south from the rim. The northern boundary of Rim Village is the caldera rim, where steep slopes extend down to the lake. Rim Village is on a complex of andesitic bedrock, glacial debris, and pyroclastic rock — volcanic rock with a high percentage of gaseous material at the time of eruption (USGS 1991). Soils developed on the surface of Mazama pumice, alluvium (stream deposits), and glacial debris. In general, the soils contain poorly defined soil horizons (layers of soil distinguishable from adjacent layers), and have a low water holding capacity and nutrient levels. These soil conditions combined with a short, relatively dry growing season make reestablishment of vegetation very difficult.

Vegetation in the general vicinity of Rim Village is sub alpine dominated by evenly spaced stands of mountain hemlock, Shasta red fir, white bark pine, and other conifers that are similar in age and size and that have an open understory. Most of the project area encompasses areas of previous disturbance and development. Vegetation includes some smaller diameter mountain hemlock trees and dry grassland meadow with some sedges, rushes, and forb species. No pumice flats exist within the project area.

CULTURAL LANDSCAPES

The design philosophy espousing a close relationship between man- made structures and the natural environment can be traced to the mid- 19th century, when American landscape architects were beginning to influence environmental planning and architectural design and practices. During the decades that followed, these theories and ideas were applied and further refined by the advocates of what became a recognized style of design, one well- suited for national parks. This style was known as the Rustic, and it served as the framework for all design work at Rim Village in Crater Lake National Park.

The landscape of Rim Village is the result of two independent factors that were closely interwoven by NPS designers to create an image for the village. The two factors were (1) function and utility and (2) aesthetics and design. The Park Service recognized that Rim Village needed specific services to accommodate the growing numbers of visitors to the park. Lodging, meals, camp and travel supplies, and general services were among the park visitors' needs. Planners also knew that the site's natural and aesthetic qualities were of equal importance to how it functioned. The Rustic style of design, then, became the "envelope" within which the functional needs of the village were addressed in a manner that was sensitive and appropriate to the natural surroundings.

Rim Village Historic District was listed in the National Register of Historic Places in 1997. The historic district, which includes seven contributing structures/buildings and other individual features that comprise a historic designed landscape in terms of form and function, is listed under Criterion A for its association with the historical development of Crater Lake

National Park. It is listed under Criterion C for its association with site planning and design by NPS landscape architects and as outstanding examples of rustic naturalistic design in the areas of architecture and landscape architecture. The structures/buildings and features were constructed over a 15- year period beginning in 1926.

The seven historic structures in Rim Village are: Crater Lake Lodge, Sinnott Memorial Building, Plaza Comfort Station, Comfort Station behind the Cafeteria (Comfort Station No. 4), Kiser Studio, Community House, and a crenelated stone masonry wall that delineates the promenade and creates a parapet with three observation bays of varying configuration that expand into the caldera.

Individual features that are historically significant to the rustic character of the designed landscape at Rim Village are listed by category. The features listed under the circulation category include roads and parking areas (vehicular circulation) and walkways and four hiking trails (pedestrian circulation), which begin at various points in the district. A promenade extending 3,450 linear fee along the edge of the caldera is the primary pedestrian circulation system for Rim Village. The features listed under vegetation include planting concepts, which illustrate the philosophy behind all plantings in the district, and plant materials, which are the material forms of the philosophy. Small- scale features include a variety of detail elements, such as free standing boulders, stone benches, and masonry details, such as steps and curbing.

VISITOR EXPERIENCE AND PARK OPERATIONS

The Rim Village is the focal point of year- round visitor activity. During the summer season observation areas along the rim and the Sinnott Memorial provide visitors with unobstructed views of Crater Lake. In addition, Rim Village serves as a staging area for hiking trails, including the Garfield Peak Trail. The Park Service maintains a visitor contact station, picnic area, comfort stations, community building used for summer evening programs, and the Sinnott Memorial with interpretive talks and exhibits about Crater lake geology and ecosystems. Park rangers also lead interpretive talks on a variety of subjects. The park concessioner provides cafeteria and restaurant food services and a gift store. The rehabilitated historic Crater Lake Lodge reopened in 1995 and offers 71 guestrooms and fine dining.

During the winter, Rim Village remains the focal point for many visitor activities; however, high snow levels reduce lake- viewing opportunities. People can have a limited view of the lake from a converted culvert viewing area placed perpendicular to the caldera. Visitors with disabilities currently have no safe viewpoint during the winter. The concessioner maintains very limited food service and a gift store. The Park Service provides guided interpretive snowshoe tours from Rim Village, and a small interpretive display is in the cafeteria. No lodging is available on the rim during the winter season.

ENVIRONMENTAL CONSEQUENCES

METHODOLOGY

This section analyzes the environmental impacts of three project alternatives on vegetation and soils, cultural landscapes, visitor experience, and park operations. Direct, indirect, and cumulative impacts of the alternatives are analyzed. Direct impacts result from specific actions, such as demolition of historic structures. Indirect impacts occur after project completion and are a result of changes in visitor- use patterns or management of resources fostered by implementation of an action. Cumulative impact analysis is discussed below. These analyses provide the basis for comparing the effects of the alternatives. Potential impacts are described in terms of type, and either beneficial or adverse effects. Potential impacts are also described in terms of context (site- specific, local, or regional effects), duration (short- term — lasting less than one year or long- term — lasting more than one year), and intensity (negligible, minor, moderate, or major). Because definitions of intensity vary by impact topic, intensities are defined separately for each impact topic analyzed in this document.

Natural Resources Intensity Definitions

- *Negligible* – The impact on biological communities, natural processes, species, soils is at the lower levels of detection or not measurable.
- *Minor* – The impact is detectable and could affect the abundance or distribution of individuals in a localized area but would not affect the viability of the local population or overall community size, structure, or composition. Changes to natural processes or soil characteristics would be limited and affect only a localized area.
- *Moderate* – The impact is clearly detectable and could have appreciable effect on the resource. This would include impacts that affect the abundance or distribution of local populations but would not affect the viability of the regional population. Changes to community size, structure, or composition, ecological processes, or soil characteristics could be substantial and occur over a larger area.
- *Major* – The impact is severely adverse or exceptionally beneficial. Impacts would have a substantial, highly noticeable, or widespread influence, affecting the abundance or distribution of a local or regional population to the extent that the population would not be likely to recover (adverse) or would return to a sustainable level (beneficial). Community size, structure, or composition, ecological processes, or soil characteristics would be highly altered and landscape level changes could be expected.

Cultural Resources Intensity Definitions

In this environmental assessment, impacts to cultural landscapes are described in terms of type, context, duration, and intensity, which is consistent with the regulations of the CEQ that implement the provisions of the National Environmental Policy Act. These impact analyses are intended, however, to comply with the requirements of both NEPA and section 106 of the National Historic Preservation Act. In accordance with the Advisory Council on

Historic Preservation's regulations, implementing section 106 of the NHPA (36 CFR Part 800, *Protection of Historic Properties*), impacts to historic structures/buildings and cultural landscapes were identified and evaluated by (1) determining the area of potential effects; (2) identifying cultural resources present in the area of potential effects that are listed in, or determined eligible to be listed in, the National Register of Historic Places; (3) applying the criteria of adverse effect to affected cultural resources either listed in, or determined eligible to be listed in, the national register; and (4) considering ways to avoid, minimize, or mitigate adverse effects.

Under the Advisory Council's regulations a determination of either adverse effect or no adverse effect must also be made for affected national register- eligible or listed cultural resources. An adverse effect occurs whenever an impact alters, directly or indirectly, any characteristic of a cultural resource that qualifies it for inclusion in the national register, e.g., diminishing the integrity of the resource's location, design, setting, materials, workmanship, feeling, or association. Adverse effects also include reasonably foreseeable effects caused by the preferred alternative that would occur later in time, be farther removed in distance, or be cumulative (36 CFR Part 800.5, *Assessment of Adverse Effects*). A determination of no adverse effect means there is an effect, but the effect would not diminish in any way the characteristics of the cultural resource that qualify it for inclusion in the national register.

CEQ regulations and DO- 28, NPS *Conservation Planning, Environmental Impact Analysis and Decision- Making* also call for a discussion of the appropriateness of mitigation, as well as an analysis of how effective the mitigation would be in reducing the intensity of a potential impact, e.g., reducing the intensity of an impact from major to moderate or minor. Any resultant reduction in intensity of impact due to mitigation, however, is an estimate of the effectiveness of mitigation under NEPA only. It does not suggest that the level of effect as defined by section 106 is similarly reduced. Although adverse effects under section 106 may be mitigated, the effect remains adverse.

A section 106 summary is included in the impact analysis sections for cultural landscapes under the preferred alternative. The section 106 summary is intended to meet the requirements of section 106 and is an assessment of the effect of the undertaking (implementation of the alternative) on cultural resources, based upon the criterion of effect and criteria of adverse effect found in the Advisory Council's regulations.

For purposes of analyzing potential impacts to cultural landscapes, the thresholds of change for the intensity of an impact are defined as follows:

- *Negligible* – Impact(s) is at the lowest levels of detection – barely perceptible and measurable. For purposes of section 106, the determination of effect would be no adverse effect.
- *Minor* – Adverse impact – Impact(s) would not affect the character defining patterns and features of a National Register of Historic Places- eligible or listed cultural landscape. For purposes of section 106, the determination of effect would be no adverse effect.
- *Minor* – Beneficial impact – Preservation of character defining patterns and features in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic*

Properties with Guidelines for the Treatment of Cultural Landscapes. For purposes of 106, the determination of effect would be no adverse effect.

- *Moderate* – Adverse impact – Impact(s) would alter a character- defining pattern(s) or feature(s) of the cultural landscape but would not diminish the integrity of the landscape to the extent that its national register eligibility is jeopardized. For purposes of section 106, the determination of effect would be no adverse effect.
- *Moderate* – Beneficial impact – Rehabilitation of a landscape or its patterns and features in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes*. For purposes of section 106, the determination of effect would be no adverse effect.
- *Major* – Adverse impact – Impact(s) would alter a character defining pattern(s) or feature(s) of the cultural landscape, diminishing the integrity of the landscape to the extent that it is no longer eligible to be listed in the National Register. For purposes of section 106, the determination of effect would be adverse effect.
- *Major* – Beneficial impact – Restoration of a landscape or its patterns and features in accordance with the Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes. For purposes of section 106, the determination of effect would be no adverse effect.

Visitor Experience Intensity Definitions

- *Negligible* – Visitors would not be affected or there would be no noticeable change in visitor experience or safety.
- *Minor* – Changes in visitor experience or safety would be detectable, although the changes would be slight. The changes would affect a relatively small number of visitors, be very localized in area, or have barely perceptible consequences to the majority of visitors.
- *Moderate* – Changes in visitor experience or safety would be readily apparent and would affect a relatively large number of visitors.
- *Major* – Changes in visitor experience or safety would be severely adverse or exceptionally beneficial, highly noticeable, and would affect relatively large numbers of visitors.

Park Operations Intensity Definitions

- *Negligible* – Park operations would not be affected or there would be no measurable or perceptible change in operations.
- *Minor* – Changes in park operations would be perceptible, although the changes would be slight and localized, and would not be expected to have an overall effect on the ability of the park to provide desired services and facilities.

- *Moderate* – Changes in park operations would be readily apparent, would have appreciable effects on park operations, and could have an effect on the ability of the park to provide some desired services and facilities.
- *Major* – Changes in park operations would be readily apparent and would highly reduce or increase the ability of the park to provide desired services and facilities.

CUMULATIVE EFFECTS

CEQ regulations, which implement NEPA, require an assessment of cumulative impacts in the decision making process for federal actions. Cumulative impacts are defined as "the impact on the environment which results from the incremental impact of the action when added to other past, present, or reasonably foreseeable future actions regardless of what agency (federal or nonfederal) or person undertakes such actions" (40 CFR 1508.7). Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.

The following are plans and proposals associated with ongoing and reasonably foreseeable actions that are considered in the cumulative impact analysis:

- Planned prescribed burns (fire management)
- Trails rehabilitation and relocation
- Waterline replacement from Munson Springs to Garfield
- Lagoon project at Munson Valley
- Rehabilitation of superintendent's residence
- Rehabilitation of Highway 62 West
- 1999 *Crater Lake National Park Visitor Services Plan* identifying the levels and kinds of NPS and concession visitor services and facilities planned within the park

IMPAIRMENT OF PARK RESOURCES OR VALUES

In addition to determining the environmental consequences of the preferred and other alternatives, NPS *Management Policies* (NPS, 2001b) and Director's Order-12, *Conservation Planning, Environmental Impact Analysis, and Decision-making*, require analysis of potential effects to determine if actions would impair park resources.

The fundamental purpose of the National Park System, established by the Organic Act and reaffirmed by the General Authorities Act, as amended, begins with a mandate to conserve park resources and values. NPS managers must always seek ways to avoid or minimize to the greatest degree practicable adverse impacts on park resources and values. However, the laws do give the NPS management discretion to allow impacts to park resources and values when necessary and appropriate to fulfill the purposes of a park, as long as the impact does not constitute impairment of the affected resources and values. Although Congress has given the NPS management discretion to allow certain impacts within parks, that discretion is limited by the statutory requirement that the National Park Service must leave park resources and

values unimpaired, unless a particular law directly and specifically provides otherwise. The prohibited impairment is an impact that, in the professional judgement of the responsible NPS manager, would harm the integrity of park resources or values, including opportunities that otherwise would be present for the enjoyment of those resources or values. An impact to any park resource or value may constitute an impairment. However, an impact would more likely constitute an impairment to the extent it affects a resource or value whose conservation is

- necessary to fulfill specific purposes identified in the establishing legislation or proclamation of the park
- key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park; or
- identified as a goal in the park's General Management Plan or other relevant NPS planning documents

A determination of impairment is made within each "Conclusion" section for impacts on vegetation and soils and cultural landscapes.

ALTERNATIVE 1: NO ACTION ALTERNATIVE

Impacts on Vegetation and Soils

Although existing development and visitor use within the project area would continue, no new construction would occur under this alternative. As a result, there would not be any new impacts on vegetation and soils.

Cumulative Impacts. Other actions would contribute to both beneficial and adverse impacts to vegetation and soils within the park. The park's fire management program would support the continued maintenance and improvement in the condition of native vegetation communities and biodiversity within the park as a whole. Over the long- term, this would ultimately result in broad scale beneficial moderate long- term effects. Construction and rehabilitation proposals such as the rehabilitation of Highway 62 West, trail improvements, and waterline replacement would contribute minor, localized long- term adverse cumulative impacts such as the disturbance of vegetation and compaction and erosion of soils that would be mitigated through best management practices such as erosion and sediment controls and revegetation. However, since the no- action alternative would not contribute to impacts of other actions, there would be no cumulative impacts under this alternative.

Conclusion. The no- action alternative would not affect nor impair vegetation and soils in the project area. The no- action alternative would not result in any cumulative effects on vegetation or soils.

Impacts on Cultural Landscapes

Retention of the parking area in front of the cafeteria building on the caldera rim has resulted in adverse impacts on the cultural landscape and historic visitor- use patterns of Rim Village Historic District. These adverse effects would continue under the no action alternative. Although the parking area in front of the cafeteria building has historically been used for parking, it has been altered and expanded over the years and does not retain design integrity. The extensive parking area has contributed to increasing traffic congestion in front of the structure that has adversely affected pedestrian lake viewing. Implementation of this alternative would result in no changes or modifications to the structures, buildings, or features that contribute to the significance of Rim Village Historic District.

Cumulative Impacts. Implementation of this alternative, when combined with the impacts of implementing the recommendations of the *Visitor Services Plan, Crater Lake National Park* (1999), such as rehabilitation of the community house, conversion of the maintenance shop to a comfort station, and redesign of the picnic area, and other past, present, and reasonably foreseeable future undertakings in the park and surrounding region, would have no cumulative impacts on cultural landscapes.

Conclusion. Implementation of this alternative would result in no changes or modifications to the structures, buildings, or features that contribute to the significance of rim village historic district. This alternative would not impair the cultural landscape.

Impacts on Visitor Experience

Overall the visitor experience would not change. Existing services and facilities would remain and visitors would continue to have the opportunity to purchase gifts and eat at the restaurant and cafeteria. The National Park Service provided information, orientation, and interpretation would continue to be limited. Visitor safety and enjoyment would also continue to be adversely affected by vehicle and traffic congestion in the parking area.

Cumulative Impacts. Cumulative actions would include proposed trail rehabilitation and continued implementation of actions identified in the 1999 *Visitors Services Plan*. Construction activities associated with these actions would result in short- term inconvenience to visitors. However, these actions would result in long- term beneficial effects on the overall visitor experience such as improved trail conditions as well as improved information, interpretation, visitor circulation, and provision of commercial services at several locations. Overall, these actions would result in minor to moderate improvements in the visitor experience. The no-action alternative would not contribute to the above effects on visitors; therefore there would not be cumulative impacts on visitor experience under this alternative.

Conclusion. There would be no change to the visitor experience under the no- action alternative. The no- action alternative would not contribute to cumulative effects on visitors.

Impacts on Park Operations

Park staff would continue routine maintenance of the cafeteria building complex and parking area, including snow removal operations. The no-action alternative would not change park maintenance operations.

Cumulative Impacts. Construction and rehabilitation proposals such as the rehabilitation of Highway 62 West, trail improvements, and waterline replacement would improve the condition of park facilities and would result in long-term minor cumulative benefits in the efficiency of park operations. The no-action alternative would not contribute to the above effects on park operations; therefore, the no-action alternative would have no cumulative impacts on park operations.

Conclusion. The no-action alternative would not change park maintenance operations and would not contribute to cumulative effects on park operations in the park.

ALTERNATIVE 2: PREFERRED ALTERNATIVE

Impacts on Vegetation and Soils

The project area would encompass approximately 10 acres, most of which has been previously disturbed by existing development or by past development (former cabin sites). Alternative 2 would remove vegetation and soils on approximately 1 to 2 acres of open, dry grassland meadows. Some small-diameter (less than 6") mountain hemlock trees would also be removed, although as many trees as possible would be salvaged and replanted. Loss of protective vegetation and water runoff could result in erosion of disturbed areas. Temporary erosion control measures would be used during construction. Also throughout areas of soil disturbance, topsoil would be removed and stockpiled prior to construction. The topsoil would be respread and supplemented with scarification, mulching, seeding, and/or planting. These actions would reduce loss of soils and potential erosion of bare soils. Consequently, adverse impacts to vegetation and soils would be localized, long-term, and minor. About 2 acres would be rehabilitated following removal of the existing cafeteria parking lot, a long-term, minor, beneficial effect.

Cumulative Impacts. Cumulative actions would contribute to both beneficial and adverse impacts to vegetation and soils within the park. The park's fire management program would support the continued maintenance and improvement in the condition of native vegetation communities and biodiversity within the park as a whole. Over time, this would ultimately result in broad scale beneficial moderate long-term effects. Construction and rehabilitation proposals would contribute minor, localized long-term adverse impacts such as the disturbance of vegetation and compaction and erosion of soils that would be mitigated through best management practices such as erosion and sediment controls and revegetation. From a parkwide standpoint, there would be net moderate long-term beneficial cumulative effects on native vegetation communities. The cumulative effect of past, present, and reasonably foreseeable future actions in combination with alternative 2 would be long-term

and a moderate benefit. Alternative 2 would contribute both a beneficial and adverse localized, minor increment to the total cumulative effects on vegetation and soils in the park.

Conclusion. Alternative 2 would disturb approximately 1 to 2 acres of grassland meadow, a long- term, minor, adverse effect on vegetation and soils. Mitigation, including salvaging of trees and topsoil, would minimize adverse effects from construction. The area of disturbance represents a very small portion of vegetation and soils within the park and would not result in impairment of these resources. Rehabilitation of about 2 acres following removal of the existing cafeteria parking lot would result in a long- term, minor, beneficial effect. The cumulative effect of past, present, and reasonably foreseeable future actions in combination with alternative 2 would be long- term and a moderate benefit. Alternative 2 would contribute both a beneficial and adverse localized, minor increment to the total cumulative effects on vegetation and soils in the park.

Impacts on Cultural Landscapes

Removal of the large parking area along the rim edge in front of the cafeteria building and its replacement with two smaller new parking lots to be constructed southeast of the structure would have beneficial, moderate, long- term impacts on the cultural landscape of Rim Village Historic District. Removal of the parking area in front of the cafeteria building has historically been used for parking, and thus its removal would eliminate that historic circulation feature of the historic district. However, the parking area has been altered over a period of years and does not retain design integrity. The extant parking area would be rehabilitated and revegetated in accordance with the planting concepts of the designed historic landscape and in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes*. Tree and shrub species would be those used historically.

The two new, smaller parking lots to the southeast of the cafeteria building would also have beneficial, moderate, long- term impacts on the cultural landscape of Rim Village Historic District because they would be located largely outside of the historic district and would be sited in keeping with the general historic design of the district's cultural landscape. The new parking lots would be connected to Rim Village Drive just east of the cafeteria building, thereby eliminating traffic in front of that structure.

The new lots would also have beneficial, moderate, long- term impacts on the cultural landscape because the extensive parking area in front of the cafeteria building would be converted to pedestrian space to facilitate lake viewing. Thus, historic visitor- use patterns on the rim (that are associated with the development of Rim Village) would be restored and key historic design associations, such as a strong visual connection from the building to the lake and design of the area to function as a staging area for rim activities, would be preserved.

Although the cafeteria building is not a contributing resource to the significance of Rim Village Historic District, removal of its 1958 and 1969 additions would convert the structure to its approximate 1928 configuration and external appearance. Thus, this action would have a beneficial, moderate, long- term impact on the cultural landscape of the historic district. If

this alternative was selected and implemented, the national register eligibility of this structure should be reevaluated in consultation with the Oregon State Historic Preservation Office.

Although the 1958 and 1969 additions to the cafeteria building would be removed under this alternative, the 1972 addition would be retained as a separate, free- standing structure to the east of the cafeteria building. Retention of this addition would have an adverse, minor, long- term impact on the cultural landscape of the historic district.

Cumulative Impacts. Actions under the preferred alternative, when combined with the impacts of implementing the recommendations of the *Visitor Services Plan, Crater Lake National Park* (1999), such as rehabilitation of the community house, conversion of the maintenance shop to a comfort station, and redesign of the picnic area, and other past, present, and reasonably foreseeable future undertakings in the park and surrounding region, would have cumulative beneficial, moderate, long- term impacts on cultural landscapes.

Conclusion. Implementation of the actions under this alternative would generally have beneficial, moderate, long- term impacts on the cultural resources that contribute to the significance of Rim Village Historic District's cultural landscape. However, retention of the 1972 addition to the cafeteria building as a separate, free- standing structure to the east of the cafeteria building would have an adverse, minor, long- term impact on the cultural landscape. Implementation of this alternative would also have beneficial, moderate, long- term impacts on the cultural landscape because historic visitor- use patterns on the rim would be restored and preserved. This alternative would not impair the cultural landscape.

Section 106 Summary. Implementation of this alternative would have no adverse effect on cultural resources that contribute to the significance of Rim Village Historic District.

Impacts on Visitor Experience

Visitor safety and enjoyment would be enhanced by the relocation of the existing parking lot and restoration of the designed historic landscape in that area, including pedestrian walkways. These actions would provide a leisurely, park- like setting for visitors and enhance the lake viewing opportunities from along the rim in this area, and improve visitor safety by eliminating conflicts between pedestrians and vehicle traffic. Visitors would also benefit from the rehabilitation of the 1928 cafeteria building for NPS use, which would allow for expanded information, orientation, and interpretation services for visitors. Rehabilitation of the 1928 building and 1972 addition, along with the removal of other building additions, would result in additional building exists and improved pedestrian flow in the remaining buildings that would make it easier to exit the buildings in an emergency. Although overall commercial services available to visitors would be reduced at the rim, some commercial gift and food services would be shifted to Mazama, which would benefit visitors by providing these services in a couple of locations. Because Rim Village is one of the major developed areas in the park and is visited by most park visitors, the overall improvements in visitor services and facilities would result in a long- term, moderate benefit to the visitor experience.

The visitor experience would be adversely affected by noise, dust, fumes, and construction activity in the project area for the duration of project improvement activities. Barriers and signing would be used to protect and direct visitors through construction zones. Construction would also be phased so that food and retail services would continue to be provided during the construction period, although at a reduced level. With the above measures to minimize effects on visitors, construction activities would result in a moderate, short- term, adverse impact on the visitor experience.

Cumulative Impacts. Cumulative actions would include proposed trail rehabilitation and continued implementation of actions identified in the 1999 *Visitors Services Plan*. Construction activities associated with these actions would result in short- term inconvenience to visitors. However, these actions would result in long- term beneficial effects on the overall visitor experience, such as improved trail conditions as well as improved information, interpretation, visitor circulation, and provision of commercial services at several locations. Overall, these actions would result in minor to moderate improvements in the visitor experience. The cumulative effect of other past, present, and reasonably foreseeable future actions identified above in combination with alternative 2 would be long- term and a minor to moderate benefit. Alternative 2 would contribute a moderate short- term, adverse effect during construction, but would contribute a long- term, moderate, beneficial effect to the cumulative effects on visitors.

Conclusion. Alternative 2 would result in short- term adverse effects to the visitor experience at Rim Village during the construction period. However, alternative 2 would provide a more park- like setting for visitors, enhance lake viewing opportunities from along the rim, improve visitor safety around and within the buildings, and improve information, orientation, and interpretation services for visitors. Thus, alternative 2 would result in an overall long- term, moderate benefit to visitor safety and experience at Rim Village. The cumulative effect of other past, present, and reasonably foreseeable future actions identified above in combination with alternative 2 would be long- term and a minor to moderate benefit. Alternative 2 would contribute a moderate, short- term, adverse effect during construction but would contribute a long- term, moderate, beneficial effect to the cumulative effects on visitors.

Impacts on Park Operations

Rehabilitation of the 1928 and 1972 buildings would improve their condition, which would reduce maintenance requirements. Fewer buildings in general would need to be maintained. Rehabilitation of the above buildings would also provide better access for operations as well as make it easier to maintain winter access. The redesign and reduction in parking would result in more efficient and reduced snow removal. Overall, alternative 2 would result in a long- term, minor, beneficial effect on park operations.

Cumulative Impacts. Other construction and rehabilitation proposals such as the rehabilitation of Highway 62 West, trail improvements, and waterline replacement would improve the condition of park facilities and would result in long- term minor benefits in the efficiency of park operations. The cumulative effect of other past, present, and reasonably foreseeable future actions in combination with alternative 2 would be long- term and a minor

benefit. Alternative 2 would contribute a minor, long- term, beneficial increment to the cumulative effects on park operations.

Conclusion. Alternative 2 would result in a long- term, minor, beneficial effect on park operations and minor, long- term, beneficial cumulative impacts on park operations.

ALTERNATIVE 3

Impacts on Vegetation and Soils

Alternative 3 would have similar impacts on vegetation and soils as alternative 2. The project area would encompass approximately 10 acres, most of which has been previously disturbed by existing development or by former cabin use. Alternative 2 would remove vegetation and soils on approximately 1 to 2 acres of open, dry grassland meadows. Some small diameter (less than 6") mountain hemlock trees would also be removed, although as many trees as possible would be salvaged and replanted. Loss of protective vegetation and water runoff could result in erosion of disturbed areas. Temporary erosion control would be used during construction. Also throughout areas of soil disturbance, topsoil would be removed and stockpiled prior to construction. The topsoil would be respread, and supplemented with scarification, mulching, seeding, and/or planting. These actions would reduce loss of soils and potential erosion of bare soils. Consequently, adverse impacts to vegetation and soils would be localized, long- term and minor. About 2 acres would be rehabilitated following removal of the existing cafeteria parking lot, a long- term, minor, beneficial effect.

Cumulative Impacts. Cumulative actions would contribute to both beneficial and adverse impacts to vegetation and soils within the park. The park's fire management program would support the continued maintenance and improvement in the condition of native vegetation communities and biodiversity within the park as a whole. Over time, this would ultimately result in broad scale beneficial moderate long- term effects. Construction and rehabilitation proposals would contribute minor, localized long- term adverse impacts such as the disturbance of vegetation and compaction and erosion of soils that would be mitigated through best management practices such as erosion and sediment controls and revegetation. From a parkwide standpoint, there would be net moderate long- term, beneficial cumulative effects on native vegetation communities. The cumulative effect of past, present, and reasonably foreseeable future actions in combination with alternative 3 would be long term and a moderate benefit. Alternative 3 would contribute both a beneficial and adverse localized, minor increment to the total cumulative effects on vegetation and soils in the park.

Conclusion. Alternative 3 would disturb approximately 1 to 2 acres of grassland meadow, a long- term, minor, adverse effect on vegetation and soils. Mitigation, including salvaging of trees and topsoil, would minimize adverse effects from construction. The area of disturbance represents a very small portion of vegetation and soils within the park and would not result in impairment of these resources. Rehabilitation of about 2 acres following removal of the existing cafeteria parking lot would result in a long- term, minor, beneficial effect. The cumulative effect of past, present, and reasonably foreseeable future actions in combination with alternative 3 would be long term and a moderate benefit. Alternative 3 would contribute

both a beneficial and adverse localized, minor increment to the total cumulative effects on vegetation and soils in the park.

Impacts on Cultural Landscapes

Removal of the large parking area along the rim edge in front of the cafeteria building and its replacement with a small new parking lot to be constructed south of the structure would have beneficial, moderate, long- term impacts on the cultural landscape of Rim Village Historic District. Removal of the parking area in front of the cafeteria building has historically been used for parking, and thus its removal would eliminate that historic circulation feature of the historic district. However, the parking area has been altered and expanded over the years and does not retain design integrity. The extant parking area would be rehabilitated and revegetated in accordance with the planting concepts of the designed historic landscape and in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes*. Tree and shrub species would be those used historically.

The new smaller parking lot to the south of the cafeteria building would have beneficial, moderate, long- term impacts on the cultural landscape of Rim Village Historic District because it would be located largely outside the historic district and would be sited and designed in a linear fashion in keeping with the historic district's cultural landscape. The new parking lot would be connected to Rim Village Drive just east of the new visitor contact facility (a building that would be constructed near the cafeteria building), thereby eliminating traffic in front of the cafeteria building and the new visitor contact facility. The new lot would also have beneficial, moderate, long- term impacts on the cultural landscape because the extensive parking area in front of the cafeteria building would be converted to pedestrian space to facilitate lake viewing. Thus, historic visitor- use patterns on the rim would be restored and key historic design associations, such as a strong visual connection from the building to the lake and design of the area to function as a staging area for rim activities, would be preserved.

Construction of a new visitor contact facility near the cafeteria building in Rim Village would have an adverse, minor, long- term impact on the cultural landscape. The impact of the new structure, however, would be reduced because it would be constructed in a style compatible with other buildings in the district.

Although the cafeteria building is not a contributing resource to the significance of Rim Village Historic District, conversion of the structure to its original 1928 configuration and external appearance would have a direct, beneficial, moderate, long- term impact on cultural landscape of the historic district. If this alternative was selected and implemented, the national register eligibility of this structure should be reevaluated in consultation with the Oregon State Historic Preservation Office.

Cumulative Impacts. Actions under alternative 3, when combined with the impacts of implementing the recommendations of the *Visitors Services Plan, Crater Lake National Park* (1999), such as rehabilitation of the community house, conversion of the maintenance shop

to a comfort station, and redesign of the picnic area, and other past, present, and reasonably foreseeable future actions in the park and surrounding region, would have cumulative, moderate, long- term beneficial impacts on cultural landscapes.

Conclusion. Implementation of this alternative would have beneficial, moderate, long- term impacts on cultural resources that contribute to the significance of the Rim Village Historic District's cultural landscape. Implementation of this alternative would also have beneficial, moderate, long- term impacts on the cultural landscape because historic visitor- use patterns on the rim would be restored and preserved.

Construction of a new visitor contact facility near the cafeteria building would have an adverse, minor, long- term impact on the cultural landscape of Rim Village Historic District. The impact of the new structure, however, would be minimized because it would be constructed in a style compatible with other buildings in the district.

This alternative would not result in impairment of the cultural landscape.

Section 106 Summary. Implementation of this alternative would have no adverse effect on cultural resources that contribute to the significance of Rim Village Historic District.

Impacts on Visitor Experience

Similar to alternative 2, visitor safety and enjoyment would be enhanced by the relocation of the existing parking lot and restoration of the designed historic landscape in that area, including pedestrian walkways. These actions would provide a leisurely, park- like setting for visitors and enhance the lake- viewing opportunities from along the rim in this area and improve visitor safety by eliminating conflicts between pedestrians and vehicle traffic. Under alternative 3, visitors would also benefit from construction of a new building for NPS use, which would allow for expanded information, orientation, and interpretation services for visitors. Construction of this building would add a new structure to the rim, but its placement would not obstruct views of the lake. Rehabilitation of the 1928 building along with the removal of other building additions would make it easier to exit the building in an emergency. Although overall commercial services available to visitors would be reduced at the rim, some commercial gift and food services would be shifted to Mazama, which would benefit visitors by providing these services in a couple of locations. Because Rim Village is one of the major developed areas in the park and is visited by most park visitors, the overall improvements in visitor services and facilities would result in a long- term moderate benefit to the visitor experience.

The visitor experience would be adversely affected by noise, dust, fumes, and construction activity in the project area for the duration of project improvement activities. Barriers and signing would be used to protect and direct visitors through construction zones. Construction would also be phased so that food and retail services would continue to be provided during the construction period, although at a reduced level. With the above measures to minimize effects on visitors, construction activities would result in a moderate, short- term, adverse impact on the visitor experience.

Cumulative Impacts. Cumulative actions would include proposed trail rehabilitation and continued implementation of actions identified in the 1999 *Visitors Services Plan*. Construction activities associated with these actions would result in short- term inconvenience to visitors. However, these actions would result in long- term beneficial effects on the overall visitor experience such as improved trail conditions as well as improved information, interpretation, visitor circulation, and provision of commercial services at several locations. Overall, these actions would result in minor to moderate improvements in the visitor experience. The cumulative effect of other past, present, and reasonably foreseeable future actions identified above in combination with alternative 3 would be long- term and a minor to moderate benefit. Alternative 3 would contribute a moderate short- term adverse effect during construction, but would contribute a long- term moderate beneficial effect to the cumulative effects on visitors.

Conclusion. Alternative 3 would result in short- term adverse effects to the visitor experience at Rim Village during the construction period. However, alternative 3 would provide a more park- like setting for visitors, primarily enhance lake viewing opportunities from along the rim, improve visitor safety around and within the buildings, and improve information, orientation, and interpretation services for visitors. There would be negligible effect on views from the rim due to construction of a new building for NPS visitor services. Thus, alternative 3 would result in an overall long- term, moderate, benefit to visitor safety and experience at Rim Village. The cumulative impact of other past, present, and reasonably foreseeable future actions in combination with alternative 3 would result in minor to moderate long- term beneficial cumulative impacts. Alternative 3 would contribute a moderate short- term adverse effect during construction, but would contribute a long- term, moderate, beneficial effect to the cumulative effects on visitors.

Impacts on Park Operations

Rehabilitation of the 1928 building would improve its condition, which would reduce maintenance requirements, as would fewer buildings in general to maintain. Rehabilitation of the above building would also provide better access for operations as well as make it easier to maintain winter access. The redesign and reduction in parking would result in more efficient and reduced snow removal. Overall, alternative 3 would result in a long- term, minor, beneficial effect on park operations.

Cumulative Impacts. Other construction and rehabilitation proposals would improve the condition of park facilities and would result in long- term minor benefits in the efficiency of park operations. The cumulative effect of past, present, and reasonably foreseeable future actions in combination with alternative 3 would be long- term and a minor benefit. Alternative 3 would contribute a minor, long- term, beneficial increment to the cumulative effects on park operations.

Conclusion. Alternative 3 would result in a long- term minor beneficial effect on park operations and would have minor long- term beneficial cumulative effects on park operations.

CONSULTATION AND COORDINATION

PUBLIC INVOLVEMENT

A press release was issued in October 2002 to the media informing the public of the proposed project and soliciting their comments or concerns. The park did not receive any public comments concerning the project. Also, as part of the park's centennial celebration activities, an open house was conducted at Rim Village on August 25, 2002. Information on the cafeteria rehabilitation project was made available and park service representatives were on hand to answer questions. The park received one comment that supported the relocation of rim parking.

The park's NHPA section 106 responsibilities for this project were conducted in accordance with the provisions of: 36 CFR 800; the 1995 programmatic agreement among the National Park Service, the Advisory Council on Historic Preservation, and the National Conference of State Historic Preservation Officers; and the 1998 "Programmatic Agreement Among National Park Service, Crater Lake National Park, State Historic Preservation Officer, Advisory Council on Historic Preservation regarding Draft Visitor Services Plan/ Environmental Impact Statement, Crater Lake National Park, Oregon." The National Park Service met onsite with two representatives of the Oregon State Historic Preservation Officer on July 31, 2002, as part of scoping for this project. During the walk- through of the site, as well as discussion of the particulars of the projects, the representatives agreed in concept to the general direction of the project.

The National Park Service notified the Cow Creek Band of the Umpqua Indian Tribe and the Klamath Tribes in November 2002 as part of scoping for this project. No comments were received from the tribes. Copies of this draft document were forwarded to each affiliated tribe for review and comment. If the tribes subsequently identify the presence of ethnographic resources, appropriate mitigation measures will be undertaken in consultation with the tribes.

A list of federally threatened, endangered, and proposed species that may be present on, or in the vicinity of Crater Lake National Park dated June 28, 2002, was received from the U.S. Fish and Wildlife Service (USFWS). The National Park Service has determined the preferred alternative would have no effect or would not likely adversely affect any federally threatened or endangered species and has sent a copy of this environmental assessment to the USFWS with a request for written concurrence with that determination.

The environmental assessment has been placed on a 30- day public review. A press release was used to inform the interested public of its availability. In addition, copies of the environmental assessment were sent to appropriate federal and state reviewing agencies and Native American tribes.

APPENDIX A: U.S. FISH AND WILDLIFE SERVICE LETTER ON THREATEN, ENDANGERED, AND PROPOSED SPECIES WITH ATTACHED LIST

United States Department of the Interior

FISH AND WILDLIFE SERVICE

Klamath Falls Fish and Wildlife Office
6610 Washburn Way
Klamath Falls, Oregon 97603-9365
(541) 885-8481 FAX: (541) 885-7837

RECEIVED
JUN - 2 2002

June 28, 2002

Memorandum

In reply refer to 1-10-02-SP-169

To: Park Superintendent, Crater Lake National Park, Crater Lake, Oregon

From: Field Supervisor, Klamath Falls Fish and Wildlife Office, Klamath Falls, Oregon

Subject: Species List Update

We are updating your list of Federally threatened, endangered and proposed species that may be present on, or in the vicinity of Crater Lake National Park. The previous list was valid for 90 days or until we sent a letter with any changes that occurred. An updated list is attached with a current compilation date (Attachment A). The list should not be considered evidence as to the presence or absence of species at proposed project locations.

Please distribute this letter and enclosure to the appropriate personnel in your office.

Thank you for your efforts to conserve, protect and recover listed and candidate species. If you have questions regarding this letter, please contact Leonard LeCaptain at (541) 885-8481.

Attachment

Attachment A

SPECIES LIST

The federal agency or designated representative shall use the following list(s), along with relevant biological studies, literature reviews, views of species experts, and site inspections, to determine if the project may affect (negatively or positively) listed or proposed species or proposed or designated critical habitat. If the subject project may affect a listed species and the proposed action is funded, permitted, or implemented by a Federal agency, the Federal agency must prepare a biological assessment if the project is a construction project which may require an environmental impact statement 1/. If a biological assessment is not required, the Federal agency still has the responsibility to review its proposed activities and determine whether the listed species may be affected. If, based on an analysis it is determined that the project will have "no effect" on listed or proposed species, then no additional correspondence with the Service is necessary under the Act's requirements. If the action agency requires a letter indicating Service review of the "no effect" determination, then please provide a summary of the project, relevant maps and species information, a copy of the species list provided by the Klamath Falls Fish and Wildlife Office (KFFWO), and justification for the effects determination to the KFFWO.

The species list(s) also includes Federal candidate species of concern that may be present within each county. While not protected under the Endangered Species Act (Act), the Service encourages Federal agencies and private land owners to utilize their authorities to conserve and protect candidate species, so activities which they authorize do not contribute to the need to list these species as either threatened or endangered under the Act. We also encourage Federal agencies and private land owners to provide the Service with information on status surveys, monitoring and other studies related to candidate species, and to address these species during consultation. During the assessment or review process, the Federal agency may engage in planning efforts, but may not make any irreversible commitment of resources. Such a commitment could constitute a violation of section 7(d) of the Act. If a listed species may be affected, the Federal agency should request, in writing through our office, formal consultation pursuant to section 7 of the Act. Informal consultation may be used to exchange information and resolve conflicts with respect to listed species prior to a written request for formal consultation.

Federal agencies are required to confer with the Service, pursuant to section 7(a)(4) of the Act, when an agency action is likely to jeopardize the continued existence of any proposed species or result in the destruction or adverse modification of proposed critical habitat (50 CFR 402.10(a)). A request for formal conference must be in writing and should include the same information that would be provided for a request for formal consultation. Conferences can also include discussions between the Service and the Federal agency to identify and resolve potential conflicts between an action and proposed species or proposed critical habitat early in the decision-making process. The Service recommends ways to minimize or avoid adverse effects of the action. The conference process fulfills the need to inform Federal agencies of possible steps that an agency might take at

an early stage to adjust its actions to avoid jeopardizing a proposed species.

The action agency and applicant should be aware that section 9 of the Act prohibits the "take" of any listed species. The definition of "take" includes to harass, harm, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct. "Harm" in the definition of 'take' in the Act means an act which actually kills or injures wildlife. Such an act may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavior patterns, including breeding, feeding, or sheltering (50 CFR 17.3). Anyone who engages in a take would be subject to prosecution under section 9 of the Act. Such taking may occur only under the authority of the Service's pursuant to section 7 (if a Federal agency is involved with this project) or through a section 10(a)(1)(B) permit, as mandated in the Act.

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[1] "Construction Project" means any major Federal action which significantly affects the quality of the human environment designed primarily to result in the building or erection of man-made structures such as dams, buildings, roads, pipelines, channels and the like. This includes Federal actions such as permits, grants, licenses, or other forms of Federal authorizations or approval which may result in construction.

LISTED, PROPOSED AND CANDIDATE SPECIES
THAT MAY OCCUR ON CRATER LAKE NATIONAL PARK

LISTED SPECIES

Mammals		
Canada lynx	*Lynx canadensis*	T
Birds		
Bald eagle	*Haliaeetus leucocephalus*	T
Northern spotted owl	*Strix occidentalis caurina*	T, CH
Fish		
Shortnose sucker	*Chasmistes brevirostris*	E, PCH
Lost River sucker	*Deltistes luxatus*	E, PCH
Bull trout (Klamath River and Columbia River population segments)	*Salvelinus confluentus*	T
Plants		
None		

PROPOSED SPECIES

None

CANDIDATE SPECIES

Birds		
Yellow-billed cuckoo (Western continental US)	*Coccyzus americanus*	C
Amphibians and Reptiles		
Oregon Spotted frog	*Rana pretiosa*	C

(E) - Endangered (T) - Threatened (CH) - Critical Habitat
(C) - Candidate (PE) - Proposed as endangered (PT) - Proposed as threatened
(PCH) - Proposed critical habitat

(List compiled June 2002)

SELECTED REFERENCES

Heritage Research Associates, Inc.

1989 "Cultural Resource Survey of Rim Village and Related Areas, Crater Lake National Park, Oregon." Report 89. Prepared by for the National Park Service by Rick Minor and Robert R. Musil. On file at Columbia Cascades Support Office, Seattle, WA.

National Park Service

1990 "The Rustic Landscape of Rim Village, 1927- 1941, Crater Lake National Park, Oregon." Prepared by Cathy A. Gilbert and Gretchen A. Luxenberg, Cultural Resources Division, Pacific Northwest Region.

1996 National Register of Historic Places Inventory Nomination Form, "Historic Resources of Crater Lake National Park," 1996 Amendment. Prepared by Stephen R. Mark, Crater Lake National Park.

1997 "Draft Crater Lake Visitor Services Plan / Environmental Impact Statement." Crater Lake National Park. Oregon.

1998a "Programmatic Agreement Among National Park Service, Crater Lake National Park, State Historic Preservation Officer, Advisory Council on Historic Preservation regarding *Draft Visitor Services Plan/Environmental Impact Statement.* Crater Lake National Park, Oregon."

1998b *Final Crater Lake Visitor Services Plan / Environmental Impact Statement,* Crater Lake National Park, Oregon.

1998c Record of Decision: *Crater Lake Visitor Services Plan / Environmental Impact Statement.* Crater Lake National Park, Oregon.

1999b *Crater Lake Visitor Services Plan, Crater Lake National Park, Oregon.*

2001 *Management Policies*. U.S. Department of the Interior. Washington, D.C.

U.S. Fish and Wildlife Service

2002 Memorandum Dated June 28, 2002. Species List Update. Klamath Falls Fish and Wildlife Office. Klamath Falls, Oregon.

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As the nation's principal conservation agency, the Department of the Interior has responsibility for most of our nationally owned public lands and natural resources. This includes fostering sound use of our land and water resources; protecting our fish, wildlife, and biological diversity; preserving the environmental and cultural values of our national parks and historical places; and providing for the enjoyment of life through outdoor recreation. The department assesses our energy and mineral resources and works to ensure that their development is in the best interests of all our people by encouraging stewardship and citizen participation in their care. The department also has a major responsibility for American Indian reservation communities and for people who live in island territories under U.S. administration.

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